

BOOKING APP BLUEPRINT

1) MODELS

- Booking: id, customer, provider, service, start, end, status, payment_status, time_range, price_snapshot, duration_snapshot
- Payment (optional): id, booking, amount, currency, status, provider_reference, created_at
- WeeklyAvailability (ref): used during booking validation
- CalendarBlock (ref): used during booking validation

2) DOMAIN RULES

- Slot validation: must be within provider availability window
- No overlap with provider calendar blocks
- No overlap with existing bookings
- Future start-time only
- Idempotency: same user + key returns same booking
- Status transitions allowed: PENDING -> CONFIRMED/CANCELLED/COMPLETED/NO_SHOW

3) SERIALIZER GUIDELINES

- BookingCreateSerializer:
 - Input: service_id, provider_id, start, idempotency_key
 - Resolves service duration & price
 - Computes end from duration
 - Validates availability & conflicts
 - Injects customer, snapshots, time_range
- BookingListSerializer:
 - Read-only output: provider, service, status, payment_status, start/end
- BookingDetailSerializer:
 - Full details for user

4) VIEW/ENDPOINT BEHAVIOR

- POST /api/bookings/
 - Auth required
 - Creates booking with idempotency logic
- GET /api/bookings/
 - Lists user's bookings only
- GET /api/bookings/{id}/
 - User can see only their booking
- POST /api/bookings/{id}/cancel/
 - Changes status to CANCELLED if allowed
- GET /api/providers/{id}/availability/
 - Returns available slots based on date range, service duration, schedule, and conflicts

5) AVAILABILITY FLOW

- Input: provider_id, service_id, from, to
- Load provider-service duration
- Load weekly schedule for target dates
- Load calendar blocks
- Load existing bookings
- Generate slots based on step size = duration

6) BUSINESS LOGIC LAYER

- resolve_provider_service: fetches provider-service pair
- is_slot_available: checks schedule + blocks + bookings
- generate_slots: returns all viable start-end ranges

7) ACCESS CONTROL

- User: create/cancel/list their bookings
- Provider: view bookings for their schedule (optional)
- Admin: full management (optional)

END OF BLUEPRINT